Measurements for the work of
Development of Doddabommasandra Lake, Phase 2, Bangalore

Sl No	Item Name	Unit	Nos	L	B	D	Qty
	Recorded on:						
EI-1	Dewatering by mechanical means using 5 HP diesel pump including hire charges of machinery, fuel and crew charges etc., complete as per the direction of the Engineer- in charge of work						
	Measurement sheet enclosed	Hour					**960.00**
	S AE 18/11/2016						
	Recorded on:						
EI-2	Excavation and **removal of silt or silt** mixed with sand in **slushy condition** from canal bed including disposing off the same in spoil bank or on the canal embankment in layers as directed etc., complete with initial lead up to **15 km and all lifts.**						
	Measurement sheets enclosed	cum					**25475.17**
	S AE 18/11/2016						
	Recorded on:						
EI-3	De-silting tank bed/ Feeder channel in dry condition by excavating the deposited bed material and disposing off the same as directed including cost of all machinery, labour etc., complete with lead up to 1 km and all lifts.						
	Measurement sheets enclosed						
	De-silting tank bed	cum					**263547.11**
	stripping for bund	cum					**6065.58**
		cum					**269612.69**
	S AE 18/11/2016						
	Recorded on:						
EI-6	Providing new embankment abutting to existing bund to strength the existing bund using soil available in adjacent area in layers of 200 to 250 mm and compacting each layer to density control of not less than 95 percent by vibrating plate compactor or pneumatic tamper including cost of all materials, machinery, labour, picking previous layer, spreading soil in layer, breaking clods, watering etc., complete with lead up to 50 m and all lifts.						
	For Embankment formation (Measurement sheets enclosed)						
	Bund From CH 0 to 990 (From Waste weir to Inlet-1)						29607.75
	Bund From CH 0 to 300 (From wetland for Inlet-2 to Wetland for Inlet-3)						7089.21
	Bund From CH 0 to 120 (Wetland at Inlet-1)						6172.20

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Sl No	Item Name	Unit	Nos	L	B	D	Qty
	For Islands	cum					7829.98
	Subtotal						50699.14
	Deduct 5% for Embankment settlement	cum					-2534.96
	Net Quantity	cum					48164.18
	S — AE 18/11/16			BOQ Ltd to 40000 cum 47500 cum			
	Recorded on:						
EI-4	Extra lead for dumping the excavated quantity of silt to dump yard upto 10 Km as per the directions of the engineer in charge of work						
	Measurement sheets enclosed	cum					**40869.00**
	S — AE 18/11/16			Ltd to BOQ 40000			
	Recorded on:						
EI-5	Extra lead for dumping the excavated quantity of silt to dump yard upto 15 Km as per the directions of the engineer in charge of work						
	Measurement sheets enclosed	cum					**20525.00**
	S — AE 18/11/16			Ltd to BOQ 19000 cum			
	Recorded on:						
EI-7	Excavation for foundation in all kinds of soil including boulders up to 0.60 m dia (0.113 cum) for dam, barrage, spillway, intake structure and other appurtenant works and placing the excavated soil neatly in dump area or disposing off the same as directed etc., complete with initial lead up to 1 km and all lifts.						
	For Toe Wall For Main Bund	cum	12	30.00	0.60	0.60	129.60
		cum	1	26.00	0.60	0.60	9.36
	For Templates to Main bund from Waste Weir						
	Template -1	cum	1	6.60	0.45	0.375	1.11
	Template -2	cum	1	8.40	0.45	0.375	1.42
	Template -3	cum	1	8.20	0.45	0.375	1.38
	Template -4	cum	1	8.10	0.45	0.375	1.37
	Template -5	cum	1	8.15	0.45	0.375	1.38
	Template -6	cum	1	7.60	0.45	0.375	1.28
	Template -7	cum	1	6.50	0.45	0.375	1.10
	Template -8	cum	1	6.00	0.45	0.375	1.01
	Template -9	cum	1	5.50	0.45	0.375	0.93
	Template -10	cum	1	4.50	0.45	0.375	0.76
	Template -11	cum	1	4.30	0.45	0.375	0.73
	Template -12	cum	1	4.70	0.45	0.375	0.79
	Template -13	cum	1	5.30	0.45	0.375	0.89
	Template -14	cum	1	5.75	0.45	0.375	0.97

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Sl No	Item Name	Unit	Nos	L	B	D	Qty
	Template -15	cum	1	5.90	0.45	0.375	1.00
	Template -16	cum	1	6.10	0.45	0.375	1.03
	Template -17	cum	1	6.02	0.45	0.375	1.02
	Template -18	cum	1	6.00	0.45	0.375	1.01
	Template -19	cum	1	5.50	0.45	0.375	0.93
	Template -20	cum	1	5.00	0.45	0.375	0.84
	Template -21	cum	1	5.40	0.45	0.375	0.91
	Template -22	cum	1	7.00	0.45	0.375	1.18
	Template -23	cum	1	7.20	0.45	0.375	1.22
	Template -24	cum	1	8.00	0.45	0.375	1.35
	Template -25	cum	1	7.90	0.45	0.375	1.33
	Template -26	cum	1	8.00	0.45	0.375	1.35
	Template -27	cum	1	7.50	0.45	0.375	1.27
		cum					**168.51**

AE
22/11/16

	Recorded on:						
8	KSRB 4-1.3 : Providing and laying in position plain cement concrete of mix 1:4:8 with OPC cement @ 180kgs, with 40mm and down size graded granite metal coarse aggregates @0.85cum and fine aggregtes @ 0.57cum machine mixed, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation and plinth, including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification As directed by the engineer in charge						
	For Toe Wall For Main Bund	cum	12	30.00	0.60	0.15	32.40
		cum	1	26.00	0.60	0.15	2.34
	For Templates to Main bund from Waste Weir						
	Template -1	cum	1	6.60	0.45	0.10	0.30
	Template -2	cum	1	8.40	0.45	0.10	0.38
	Template -3	cum	1	8.20	0.45	0.10	0.37
	Template -4	cum	1	8.10	0.45	0.10	0.36
	Template -5	cum	1	8.15	0.45	0.10	0.37
	Template -6	cum	1	7.60	0.45	0.10	0.34
	Template -7	cum	1	6.50	0.45	0.10	0.29
	Template -8	cum	1	6.00	0.45	0.10	0.27
	Template -9	cum	1	5.50	0.45	0.10	0.25
	Template -10	cum	1	4.50	0.45	0.10	0.20
	Template -11	cum	1	4.30	0.45	0.10	0.19
	Template -12	cum	1	4.70	0.45	0.10	0.21
	Template -13	cum	1	5.30	0.45	0.10	0.24
	Template -14	cum	1	5.75	0.45	0.10	0.26
	Template -15	cum	1	5.90	0.45	0.10	0.27
	Template -16	cum	1	6.10	0.45	0.10	0.27
	Template -17	cum	1	6.02	0.45	0.10	0.27
	Template -18	cum	1	6.00	0.45	0.10	0.27

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Sl No	Item Name	Unit	Nos	L	B	D	Qty
	Template -19	cum	1	5.50	0.45	0.10	0.25
	Template -20	cum	1	5.00	0.45	0.075	0.17
	Template -21	cum	1	5.40	0.45	0.075	0.18
	Template -22	cum	1	7.00	0.45	0.075	0.24
	Template -23	cum	1	7.20	0.45	0.075	0.24
	Template -24	cum	1	8.00	0.45	0.075	0.27
	Template -25	cum	1	7.90	0.45	0.075	0.27
	Template -26	cum	1	8.00	0.45	0.075	0.27
	Template -27	cum	1	7.50	0.45	0.075	0.25
		cum					**41.99**

24/11/16 AE

	Recorded on:						
9	KSRB 5.2-3:Providing and constructing granite / trap / basalt size stone masonry in foundation CM 1:6, stone hammered dressed in courses not less than 20 cms high, bond stones at two m apart in eachcourse including cost of all materials, labour,curing complete as per specifications.Specification As directed by the engineer in charge						
	For Toe Wall For Main Bund	cum	12	30.00	0.60	0.90	194.40
		cum	1	26.00	0.60	0.90	14.04
	For Templates to Main bund from Waste Weir						
	Template -1	cum	1	6.60	0.45	0.45	1.34
	Template -2	cum	1	8.40	0.45	0.45	1.70
	Template -3	cum	1	8.20	0.45	0.45	1.66
	Template -4	cum	1	8.10	0.45	0.45	1.64
	Template -5	cum	1	8.15	0.45	0.45	1.65
	Template -6	cum	1	7.60	0.45	0.45	1.54
	Template -7	cum	1	6.50	0.45	0.45	1.32
	Template -8	cum	1	6.00	0.45	0.45	1.22
	Template -9	cum	1	5.50	0.45	0.45	1.11
	Template -10	cum	1	4.50	0.45	0.45	0.91
	Template -11	cum	1	4.30	0.45	0.45	0.87
	Template -12	cum	1	4.70	0.45	0.45	0.95
	Template -13	cum	1	5.30	0.45	0.45	1.07
	Template -14	cum	1	5.75	0.45	0.45	1.16
	Template -15	cum	1	5.90	0.45	0.45	1.19
	Template -16	cum	1	6.10	0.45	0.45	1.24
	Template -17	cum	1	6.02	0.45	0.45	1.22
	Template -18	cum	1	6.00	0.45	0.45	1.22
	Template -19	cum	1	5.50	0.45	0.45	1.11
	Template -20	cum	1	5.00	0.45	0.45	1.01
	Template -21	cum	1	5.40	0.45	0.45	1.09
	Template -22	cum	1	7.00	0.45	0.45	1.42
	Template -23	cum	1	7.20	0.45	0.45	1.46
	Template -24	cum	1	8.00	0.45	0.45	1.62

Checked Asst Manager

DCF 8/12/16

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Sl No	Item Name	Unit	Nos	L	B	D	Qty
	Template -25	cum	1	7.90	0.45	0.45	1.60
	Template -26	cum	1	8.00	0.45	0.45	1.62
	Template -27	cum	1	7.50	0.45	0.45	1.52
		cum					**243.90**
	Recorded on:						
2	KSRB 4-1.6 ; Providing and laying in position plain cement concrete of mix M15 with cement @ 240kgs, with 20mm and down size graded granite metal coarse aggregates @0.878cum and fine aggregtes @ 0.459cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation,plinth and cills, including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification As directed by the engineer in charge						
	For Toe Wall For Main Bund	cum	12	30.00	0.60	0.075	16.20
		cum	1	26.00	0.60	0.075	1.17
	For Templates to Main bund from Waste Weir						
	Template -1	cum	1	6.60	0.45	0.075	0.22
	Template -2	cum	1	8.40	0.45	0.075	0.28
	Template -3	cum	1	8.20	0.45	0.075	0.28
	Template -4	cum	1	8.10	0.45	0.075	0.27
	Template -5	cum	1	8.15	0.45	0.075	0.28
	Template -6	cum	1	7.60	0.45	0.075	0.26
	Template -7	cum	1	6.50	0.45	0.075	0.22
	Template -8	cum	1	6.00	0.45	0.075	0.20
	Template -9	cum	1	5.50	0.45	0.075	0.19
	Template -10	cum	1	4.50	0.45	0.075	0.15
	Template -11	cum	1	4.30	0.45	0.075	0.15
	Template -12	cum	1	4.70	0.45	0.075	0.16
	Template -13	cum	1	5.30	0.45	0.075	0.18
	Template -14	cum	1	5.75	0.45	0.075	0.19
	Template -15	cum	1	5.90	0.45	0.075	0.20
	Template -16	cum	1	6.10	0.45	0.075	0.21
	Template -17	cum	1	6.02	0.45	0.075	0.20
	Template -18	cum	1	6.00	0.45	0.075	0.20
	Template -19	cum	1	5.50	0.45	0.075	0.19
	Template -20	cum	1	5.00	0.45	0.075	0.17
	Template -21	cum	1	5.40	0.45	0.075	0.18
	Template -22	cum	1	7.00	0.45	0.075	0.24
	Template -23	cum	1	7.20	0.45	0.075	0.24
	Template -24	cum	1	8.00	0.45	0.075	0.27
	Template -25	cum	1	7.90	0.45	0.075	0.27

PMC

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Environmental Engineer

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Sl No	Item Name	Unit	Nos	L	B	D	Qty
	Template -26	cum	1	8.00	0.45	0.075	0.27
	Template -27	cum	1	7.50	0.45	0.075	0.25
		cum					23.28

AE 15/12/16

	Recorded on:						
EI-8	Providing and laying **Pitching on slopes** laid over prepared filter media including boulder apron laid dry in front of toe of embankment complete as per drawing and Technical specifications A. Stone / Boulder						
	For Pitching to Main bund from waste weir side						
		cum	1	14.40	(3.9+6.4+7)/3	0.45	37.37
		cum	1	14.90	(6.6+8.4)/2	0.45	50.29
		cum	1	14.80	(8.4+8.2)/2	0.45	55.28
		cum	1	14.90	(8.2+8.1)/2	0.45	54.65
		cum	1	15.00	(8.1+8.15)/2	0.45	54.84
		cum	1	14.90	(8.15+7.6)/2	0.45	52.80
		cum	1	14.70	(7.6+6.5)/2	0.45	46.64
		cum	1	15.00	(6.5+6)/2	0.45	42.19
		cum	1	14.90	(6+5.5)/2	0.45	38.55
		cum	1	15.25	(5.5+4.5)/2	0.45	34.31
		cum	1	14.90	(4.5+4.3)/2	0.45	29.50
		cum	1	14.80	(4.3+4.7)/2	0.45	29.97
		cum	1	14.90	(4.7+5.3)/2	0.45	33.53
		cum	1	14.75	(5.3+5.75)/2	0.45	36.67
		cum	1	14.85	(5.75+5.9)/2	0.45	38.93
		cum	1	14.75	(5.9+6.1)/2	0.45	39.83
		cum	1	14.95	(6.1+6)/2	0.45	40.77
		cum	1	14.95	(6+6)/2	0.45	40.43
		cum	1	15.05	(6+5.5)/2	0.45	38.94
		cum	1	15.05	(5.5+5)/2	0.45	35.56
		cum	1	14.90	(5+5.4)/2	0.45	34.87
		cum	1	15.40	(5.4+7)/2	0.45	42.97
		cum	1	15.00	(7+7.2)/2	0.45	47.93
		cum	1	14.60	(7.2+8)/2	0.45	49.93
		cum	1	15.50	(8+7.9)/2	0.45	55.45
		cum	1	13.60	(7.9+8)/2	0.45	48.65
		cum	1	8.10	(8+7.5)/2	0.45	28.25
							1139.08

AE 25/1/2017

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Environmental Engineer

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Sl No	Item Name	Unit	Nos	L	B	D	Qty
	Recorded on:						
EI-7	Excavation for foundation in all kinds of soil including boulders up to 0.60 m dia (0.113 cum) for dam, barrage, spillway, intake structure and other appurtenant works and placing the excavated soil neatly in dump area or disposing off the same as directed etc., complete with initial lead up to 1 km and all lifts.						
	For Toe wall						
	Ring bund	cum	17	30.00	0.60	0.60	183.60
		cum	1	5.00	0.60	0.60	1.80
	Island-1	cum	7	30.00	0.60	0.30	37.80
		cum	1	5.05	0.60	0.30	0.91
	Island-2	cum	6	30.00	0.60	0.30	32.40
		cum	1	22.00	0.60	0.30	3.96
	For Templates						
	For Island- 1						
	Template -1	cum	1	5.00	0.45	0.375	0.84
	Template -2	cum	1	4.60	0.45	0.375	0.78
	Template -3	cum	1	4.40	0.45	0.375	0.74
	Template -4	cum	1	4.40	0.45	0.375	0.74
	Template -5	cum	1	4.20	0.45	0.375	0.71
	Template -6	cum	1	3.00	0.45	0.375	0.51
	Template -7	cum	1	3.00	0.45	0.375	0.51
	Template -8	cum	1	3.60	0.45	0.375	0.61
	Template -9	cum	1	3.90	0.45	0.375	0.66
	Template -10	cum	1	3.20	0.45	0.375	0.54
	Template -11	cum	1	3.20	0.45	0.375	0.54
	Template -12	cum	1	3.90	0.45	0.375	0.66
	Template -13	cum	1	4.60	0.45	0.375	0.78
	Template -14	cum	1	4.80	0.45	0.375	0.81
	For Island- 2						
	Template -1	cum	1	4.40	0.45	0.375	0.74
	Template -2	cum	1	4.00	0.45	0.375	0.68
	Template -3	cum	1	4.10	0.45	0.375	0.69
	Template -4	cum	1	4.40	0.45	0.375	0.74
	Template -5	cum	1	4.50	0.45	0.375	0.76
	Template -6	cum	1	4.00	0.45	0.375	0.68
	Template -7	cum	1	4.00	0.45	0.375	0.68
	Template -8	cum	1	4.00	0.45	0.375	0.68
	Template -9	cum	1	6.00	0.45	0.375	1.01
	Template -10	cum	1	6.30	0.45	0.375	1.06
	Template -11	cum	1	6.30	0.45	0.375	1.06
	Template -12	cum	1	7.00	0.45	0.375	1.18
	Template -13	cum	1	5.80	0.45	0.375	0.98
							280.82

AE
25/2/17

Consulting Engineers (India) Pvt. Ltd. Bangalore PMC

Contractor

Environmental Engineer

Asst. Executive Engineer

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Sl No	Item Name	Unit	Nos	L	B	D	Qty
	Recorded on:						
8	KSRB 4-1.3 : Providing and laying in position plain cement concrete of mix 1:4:8 with OPC cement @ 180kgs, with 40mm and down size graded granite metal coarse aggregates @0.85cum and fine aggregtes @ 0.57cum machine mixed, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation and plinth, including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification As directed by the engineer in charge						
	For Toe wall						
	Ring bund	cum	17	30.00	0.60	0.10	30.60
		cum	1	5.00	0.60	0.10	0.30
	Island-1	cum	7	30.00	0.60	0.10	12.60
		cum	1	5.05	0.60	0.10	0.30
	Island-2	cum	6	30.00	0.60	0.10	10.80
		cum	1	22.00	0.60	0.10	1.32
	For Island- 1						
	Template -1	cum	1	5.00	0.45	0.10	0.23
	Template -2	cum	1	4.60	0.45	0.10	0.21
	Template -3	cum	1	4.40	0.45	0.10	0.20
	Template -4	cum	1	4.40	0.45	0.10	0.20
	Template -5	cum	1	4.20	0.45	0.10	0.19
	Template -6	cum	1	3.00	0.45	0.10	0.14
	Template -7	cum	1	3.00	0.45	0.10	0.14
	Template -8	cum	1	3.60	0.45	0.10	0.16
	Template -9	cum	1	3.90	0.45	0.10	0.18
	Template -10	cum	1	3.20	0.45	0.10	0.14
	Template -11	cum	1	3.20	0.45	0.10	0.14
	Template -12	cum	1	3.90	0.45	0.10	0.18
	Template -13	cum	1	4.60	0.45	0.10	0.21
	Template -14	cum	1	4.80	0.45	0.10	0.22
	For Island- 2						
	Template -1	cum	1	4.40	0.45	0.10	0.20
	Template -2	cum	1	4.00	0.45	0.10	0.18
	Template -3	cum	1	4.10	0.45	0.10	0.18
	Template -4	cum	1	4.40	0.45	0.10	0.20
	Template -5	cum	1	4.50	0.45	0.10	0.20
	Template -6	cum	1	4.00	0.45	0.10	0.18
	Template -7	cum	1	4.00	0.45	0.10	0.18
	Template -8	cum	1	4.00	0.45	0.10	0.18
	Template -9	cum	1	6.00	0.45	0.10	0.27
	Template -10	cum	1	6.30	0.45	0.10	0.28
	Template -11	cum	1	6.30	0.45	0.10	0.28
	Template -12	cum	1	7.00	0.45	0.10	0.32
	Template -13	cum	1	5.80	0.45	0.10	0.26
							61.35

11/3/2017

PMC

Contractor

Environmental Engineer

Asst. Executive Engineer

Scanned by CamScanner

Sl No	Item Name	Unit	Nos	L	B	D	Qty
	Recorded on:						
9	KSRB 5.2-3:Providing and constructing granite / trap / basalt size stone masonry in foundation CM 1:6, stone hammered dressed in courses not less than 20 cms high, bond stones at two m apart in eachcourse including cost of all materials, labour,curing complete as per specifications.Specification As directed by the engineer in charge						
	For Toe wall						
	Ring bund	cum	17	30.00	0.60	0.60	183.60
		cum	1	5.00	0.60	0.60	1.80
	Island-1	cum	7	30.00	0.60	0.60	75.60
		cum	1	5.00	0.60	0.60	1.80
	Island-2	cum	6	30.00	0.60	0.60	64.80
		cum	1	22.00	0.60	0.60	7.92
	For Templates						
	For Island- 1						
	Template -1	cum	1	5.00	0.45	0.45	1.01
	Template -2	cum	1	4.60	0.45	0.45	0.93
	Template -3	cum	1	4.40	0.45	0.45	0.89
	Template -4	cum	1	4.40	0.45	0.45	0.89
	Template -5	cum	1	4.20	0.45	0.45	0.85
	Template -6	cum	1	3.00	0.45	0.45	0.61
	Template -7	cum	1	3.00	0.45	0.45	0.61
	Template -8	cum	1	3.60	0.45	0.45	0.73
	Template -9	cum	1	3.90	0.45	0.45	0.79
	Template -10	cum	1	3.20	0.45	0.45	0.65
	Template -11	cum	1	3.20	0.45	0.45	0.65
	Template -12	cum	1	3.90	0.45	0.45	0.79
	Template -13	cum	1	4.60	0.45	0.45	0.93
	Template -14	cum	1	4.80	0.45	0.45	0.97
	For Island- 2						
	Template -1	cum	1	4.40	0.45	0.45	0.89
	Template -2	cum	1	4.00	0.45	0.45	0.81
	Template -3	cum	1	4.10	0.45	0.45	0.83
	Template -4	cum	1	4.40	0.45	0.45	0.89
	Template -5	cum	1	4.50	0.45	0.45	0.91
	Template -6	cum	1	4.00	0.45	0.45	0.81
	Template -7	cum	1	4.00	0.45	0.45	0.81
	Template -8	cum	1	4.00	0.45	0.45	0.81
	Template -9	cum	1	6.00	0.45	0.45	1.22
	Template -10	cum	1	6.30	0.45	0.45	1.28
	Template -11	cum	1	6.30	0.45	0.45	1.28
	Template -12	cum	1	7.00	0.45	0.45	1.42
	Template -13	cum	1	5.80	0.45	0.45	1.17
		cum					**359.94**

Checked the MB @ adm

AE 23/3/2017

DE 23/3/2017

Wilson Consulting Engineers (India) Pvt. Ltd. Bangalore PMC

Contractor

Environmental Engineer

Asst. Executive Engineer

Scanned by CamScanner